

U.S.S.N. 10,810,912

Claim Amendments

Please amend claims 1, 5, and 10 as follows

Please add new claims 14-20 as follows:

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Claims as Amended

1. (currently amended) A method of seasoning a process chamber having interior surfaces to reduce the formation of silicon residues on said interior surfaces in a subsequent silicon plasma deposition process, comprising the steps of:

cleaning said process chamber according to a cleaning process comprising a chlorine containing etchant gas; and

providing a seasoning film on said interior surfaces of said process chamber by comprising introducing precursor gases selected from the group consisting of silane and an oxygen-containing gas, dichlorosilane and a nitrogen-containing gas, into said process chamber at a pressure of from about 10 Torr to about 760 Torr.

2. (previously presented) The method of claim 1 wherein said seasoning film comprises silicon dioxide and said precursor gases comprise said silane and said oxygen containing-gas.

3. (previously presented) The method of claim 1 wherein said

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seasoning film comprises silicon nitride and said precursor gases comprise said dichlorosilane and said nitrogen-containing gas.

4. (previously presented) The method of claim 1 wherein said seasoning film comprises silicon carbide and said precursor gases comprise trimethyl silane and said carbon containing gas.

5. ((currently amended)) A method of seasoning a chemical vapor deposition chamber having interior surfaces and a gas distribution plate to reduce the formation of silicon residues on said interior surfaces and said gas distribution plate in a subsequent silicon plasma deposition process, comprising the steps of:

cleaning said chamber according to a cleaning process comprising a chlorine containing etchant gas; and

providing a seasoning film having a thickness of from about 2 μm to about 10 μm on said interior surfaces and said gas distribution plate of said chamber by comprising introducing precursor gases selected from the group consisting of silane and an oxygen-containing gas, dichlorosilane and a nitrogen-

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containing gas, and trimethylsilane and a carbon containing gas into said process chamber at a chamber pressure of from about 10 Torr to about 760 Torr at a temperature from about 500 degrees C to about 700 degrees C.

6. (previously presented) The method of claim 5 wherein said seasoning film comprises oxide-based material.

7. (previously presented) The method of claim 5 wherein said seasoning film comprises silicon dioxide and said precursor gases comprise said silane and said oxygen containing-gas.

8. (previously presented) The method of claim 5 wherein said seasoning film comprises silicon nitride and said precursor gases comprise said dichlorosilane and said nitrogen-containing gas.

9. (previously presented) The method of claim 5 wherein said seasoning film comprises silicon carbide and said precursor gases comprise said trimethylsilane and said carbon containing gas.

10. (currently amended) A method of seasoning a chemical vapor deposition chamber having interior surfaces and a gas

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distribution plate to reduce the formation of silicon residues on said interior surfaces and said gas distribution plate in a subsequent silicon plasma deposition process, comprising the steps of:

cleaning said chamber according to a cleaning process comprising a chlorine containing etchant gas; and

providing a seasoning film having a thickness of from about 2 μm to about 10 μm on said interior surfaces and said gas distribution plate of said chamber ~~by~~ comprising introducing precursor gases selected from the group consisting of silane and an oxygen-containing gas, dichlorosilane and a nitrogen-containing gas, and trimethylsilane and a carbon containing gas into said process chamber at a chamber pressure of from about 10 Torr to about 760 Torr at a temperature from about 500 degrees C to about 700 degrees C and a process time of from about 0.5 minutes to about 10 minutes.

11. (previously presented) The method of claim 10 wherein said seasoning film comprises silicon dioxide and said precursor gases comprise said silane and said oxygen containing-gas.

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12. (previously presented) The method of claim 10 wherein said seasoning film comprises silicon nitride and said precursor gases comprise said dichlorosilane and said nitrogen-containing gas.

13. (previously presented) The method of claim 5 wherein said seasoning film comprises silicon carbide and said precursor gases comprise said trimethylsilane and said carbon containing gas.

14. (new) The method of claim 1, wherein said step of cleaning comprises removing silicon residues from said chamber.

15. (new) The method of claim 1, further comprising the step of depositing a silicon layer on a substrate within said chamber according to a plasma deposition process.

16. (new) The method of claim 15, wherein said silicon comprises amorphous silicon.

17. (new) The method of claim 5, wherein said step of cleaning comprises removing silicon residues from said chamber.

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18. (new) The method of claim 5, further comprising the step of depositing a silicon layer on a substrate within said chamber according to a plasma deposition process.

19. (new) The method of claim 19, wherein said step of cleaning comprises removing silicon residues from said chamber.

20. (new) The method of claim 10, further comprising the step of depositing a silicon layer on a substrate within said chamber according to a plasma deposition process.